



BUILDING GLOBAL COMMUNICATIONS

EX PARTE – FILED ELECTRONICALLY

October 6, 2004

Ms. Marlene Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Standards Update for the 700 MHz Band, WT Docket 96-86

Dear Ms. Dortch,

The Private Radio Section ("PRS") of the Wireless Communications Division ("WCD") of the Telecommunications Industry Association ("TIA")¹ respectfully submits the following industry update with regard to standards development for narrowband and wideband interoperability channels in the 700 MHz public safety band.

TIA is an American National Standards Institute ("ANSI")-accredited standards development organization and its product-oriented divisions and their associated engineering committees include technical experts from equipment manufacturers who serve the wireless industry as well as technical user representatives. TIA's engineering committees develop various standards and technical bulletins to address a wide range of requirements, including system performance, interference abatement, compatibility and interoperability. Within this context, TIA's PRS focuses in part on the necessary requirements to support reliable wireless communications responding to the needs of public safety entities. TIA's PRS prepared the standards summary contained herein.

On September 30, 2004 the National Public Safety Telecommunications Council (NPSTC) filed an ex-parte filing on this docket that referenced this same subject. This letter is a follow-up to confirm information contained in that filing.

TIA has revised or reaffirmed several documents referenced in current 700 MHz rules with regards to the ANSI/EIA/TIA-102 (Project 25) standards for voice and low speed data. We have also completed the ANSI process for the technical standards suite for wideband interoperability channels identified in the 700 MHz rules. The most recent PRS document summary (20040913 TIA TR8 Doc Summary) is attached to this letter. It shows the document name and current TIA status.

¹ TIA is the leading trade association serving the communications and information technology industry, with approximately 1,000 member companies that manufacture or supply the products and services used in global communications. TIA represents the communications sector of the Electronic Industries Alliance (EIA). On occasion, a TIA division or section of a TIA division will file in a regulatory proceeding representing the views of only the members of that division or section. These comments are from the Private Radio Section of the Wireless Communications Division.

Specifically, the following Project 25 voice and low speed data documents are referenced in CFR 47 §90.548, and have revision or reaffirmation dates as noted below and in the attachment:

Project 25 FDMA Common Air Interface, ANSI/TIA/EIA-102.BAAA
Project 25 Vocoder Description, ANSI/TIA/EIA-102.BABA
Project 25 Data Overview, ANSI/TIA/EIA-102.BAEA
Project 25 Packet Data Specification, ANSI/TIA/EIA-102.BAEB
Project 25 Radio Control Protocol (RCP), ANSI/TIA/EIA-102.BAEE

§ 90.548 Interoperability Technical Standards. (1) Transmitters designed for voice operation shall include a 12.5 kHz bandwidth mode of operation conforming to the following standards, which are incorporated by reference: Project 25 FDMA Common Air Interface-New Technology Standards Project-Digital Radio Technical Standards, approved April 15, 1998, Telecommunications Industry Association, ANSI/TIA/EIA-102.BAAA-1998. **(Revision A published September 2003. Proper reference is now ANSI/TIA/EIA-102.BAAA-A-2003)**

Project 25 Vocoder Description, approved May 5, 1998, Telecommunications Industry Association, ANSI/TIA/EIA-102.BABA-1998. **(Reaffirmed December 2003. Proper reference is now ANSI/TIA/EIA-102.BABA-2003)**

(2) Transmitters designed for data transmission shall include a 12.5 kHz bandwidth mode of operation conforming to the following standards, which are incorporated by reference: Project 25 Data Overview-New Technology Standards Project-Digital Radio Technical Standards, approved March 3, 2000, Telecommunications Industry Association, ANSI/TIA/EIA-102.BAEA-2000; **(Revision A published June, 2004. Proper reference is now ANSI/TIA/EIA-102.BAEA-A-2004)** Project 25 Packet Data Specification-New Technology Standards Project-Digital Radio Technical Standards, approved March 3, 2000, Telecommunications Industry Association, ANSI/TIA/EIA-102.BAEB-2000; **(Pending, approved for Default ballot to remove reference to Trunking Procedures TSB so the document can pass TIA publication rules)**

Project 25 Radio Control Protocol (RCP)-New Technology Standards Project-Digital Radio Technical Standards, approved March 3, 2000, Telecommunications Industry Association, ANSI/TIA/EIA-102.BAEE-2000; **(Renamed and Revision A published June 2004. Proper reference is now Radio Management Protocol ANSI/TIA/EIA-102.BAEE-A-2004)**

Importantly, and not referenced in the NPSTC letter, was the updated document for encryption.

§ 90.553 Encryption. (a) Encryption is permitted on all but the two nationwide Interoperability calling channels. Radios employing encryption must have a readily accessible switch or other readily accessible control that permits the radio user to disable encryption. (b) If Encryption is employed then the following encryption protocol must be used: Project 25 DES Encryption Protocol, approved January 23, 2001, Telecommunications Industry Association, ANSI/TIA/EIA-102.AAAA-A-2001. **The encryption protocol has been upgraded to include DES, 3DES and AES under a new ANSI standard for Project 25 Block Encryption. The NCC's Final Report recommended using the AES protocol for 700 MHz interoperability. We recommend that the text for 90.553(b) be changed to read:**

§ 90.553 Encryption. (b) If Encryption is employed then the following encryption protocol must be used: Project 25 AES Encryption mode, Telecommunications Industry Association, ANSI/TIA/EIA-102.AAAD-2002 Block Encryption Protocol.

Wideband I/O standards, which are not in the current FCC 700 rules, were part of the NCC's final recommendations and were upgraded to full ANSI standards after July, 2003:

TIA-902.BAAB has been upgraded as ANSI/TIA/EIA-902.BAAB-A (SAM Physical Layer)

TIA-902.BAAD has been upgraded as ANSI/TIA/TIA-902.BAAD-A (SAM Radio Channel Coding Layer)

The remainder of the wideband I/O RF standards documents (MAC, LLC, PDS, and MM) will be upgraded to ANSI standards within the next 6-9 months. These include:

TIA-902.BAAC

TIA-902.BAAE

TIA-902.BAAF

TIA-902.BAEB

TIA continues to work on standards for interoperable text messaging for wideband channels in the 700 MHz band within TIA-902 standards suite. This in-progress document is titled TIA 902-AAAB Text Messaging Document.

The TIA PRS previously submitted updates to the FCC on both narrowband and wideband emissions (Adjacent Channel Power tables) referenced in 47 CFR §90.543, including ACP tables for all three wideband data channel bandwidths: 50, 100, and 150 kHz. TIA also asked that Out of Band Emissions (OOBE) into paired receive bands be relaxed by 15 dB. These documents were filed by the PRS on 08/23/2001, 07/10/2002, 07/16/2002, 2/9/2003, and 12/23/2002.

Two other important areas not addressed in the current rules are: (1) secondary fixed operation, and (2) requirements for digital base station ID. We concur with NPSTC's recommendation that both of these items follow the same rules as for the 800 MHz band. In the 800 MHz band, 47 CFR §90.637 addresses secondary fixed operation and §90.647(c) addresses ID issues.

Respectfully submitted,

Private Radio Section
Wireless Communications Division
Telecommunications Industry Association

By: _____/s/_____

Wayne Leland, Chairman
Private Radio Section

cc: *Mr. John Muleta, Chief, Wireless Telecommunications Bureau*
Mr. Michael Wilhelm, Chief, Public Safety & Critical Infrastructure Division